

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed February 5, 2008 (Paper No. 20071223). Upon entry of this response, claims 2-14, 18, 20-22, 24-30, and 37-72 are pending in the application and claims 31-36 are allowed. In this response, claims 2, 13-14, 18, 20, 22, 24, 28-29, 37 and 39-40 have been amended and claims 15-16, 19, and 23 have been canceled without prejudice, waiver, or disclaimer. Also, claims 41-72 have been added. Applicants respectfully request that the amendments being filed herewith be entered and request reconsideration and allowance of all pending claims.

I. Claim Objections

Claims 13, 28, and 37-40 have been objected to for various informalities. Specifically, claim 13 has been objected to because “‘a signal’ and ‘an adjustment’ should be ‘the signal’ and ‘the adjustment’, respectively, for clarity.” Claim 28 has been objected to because “‘method’ should be ‘system’.” Claims 37-40 have been objected to because, in claims 37 and 40, “‘modem’ should be ‘DSL modem’.” Claims 13, 28, 37, and 40 have been amended according to the Examiner’s suggestions. In view of these amendments, Applicants respectfully submit that the objections have been overcome and request that the objections be withdrawn.

II. Claim Rejections under 35 U.S.C. §112, Second Paragraph

Claims 37-40 appear to have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Office Action alleges that there is insufficient antecedent basis for the limitation “the DSL” in claim 37. In response to the rejection, Applicants have amended claim 37. In view of this amendment, Applicants believe that claims 37-40 define the invention in the manner required by 35 U.S.C. § 112. Accordingly Applicants respectfully request that the rejection be withdrawn.

III. Claim Rejections under 35 U.S.C. §102(b)

Claims 2-4, 6, 9-11, 14-15, 20, 22, 28-30, and 37-40 have been rejected under 35 U.S.C. § 102(b) as allegedly anticipated by *Goldstein* (U.S. Patent No. 5,265,151, hereafter "*Goldstein*"). Claim 15 has been canceled without prejudice, waiver, or disclaimer. Applicants respectfully traverse this rejection as applied to pending claims 2-4, 6, 9-11, 14, 20, 22, 28-30, and 37-40.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP § 2131 *quoting* *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Therefore, every claimed feature of the claimed invention must be represented in the applied reference to constitute a proper rejection under 35 U.S.C. § 102(b). In the present case, not every feature of the amended claims is represented in the *Goldstein* reference.

A. Initial Matter

The Office Action has grouped independent claims 1, 14, 22, and 37 together in a common rejection (Office Action, pages 6-7). As stated in MPEP § 707.07(d) under IMPROPERLY EXPRESSED REJECTIONS, "A plurality of claims should never be grouped together in a common rejection, unless that rejection is equally applicable to all claims in the group."

As an initial matter, claims 14 and 22 are written in means plus function format, so that the respective means plus function elements of claims 14 and 22 should be interpreted pursuant to 35 U.S.C. Section 112, sixth paragraph, which states that "such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." Claims 2 and 37 are not written in means plus function format. Therefore, Applicants respectfully submit that claims 14 and 22 are not similar to claims 2 and 37.

B. Independent Claim 2

Applicants' amended claim 2 provides as follows (emphasis added):

A method of adjusting transmit performance parameters over a digital subscriber line (DSL), the method performed in a first DSL modem, the method comprising the steps of:

negotiating, with a second DSL modem, a limiting value of a first performance parameter,

receiving, from the second DSL modem, a signal exhibiting the first performance parameter;

determining a signal-to-noise-ratio for the received signal; and

requesting, from the second DSL modem, an adjustment in a second performance parameter associated with the received signal, wherein the second performance parameter is different from the first performance parameter.

Applicants respectfully submit that amended independent claim 2 is allowable for at least the reason that *Goldstein* does not disclose, teach, or suggest at least the features recited and emphasized above in amended claim 2.

The Office Action alleges "Goldstein discloses ... the receiver circuit of the receiving modem negotiates with a transmitting modem (notice since the transmission power level of the transmitting modem is based on the control information of the power level of the receiving modem), a value for a first performance parameter, for instance, a value of the error rate..." (Office Action, page 4). The Office Action further alleges that the "value of the first parameter, for example, the signal noise ration and/or IMD or both can be considered as a limiting ... value" (Office Action, page 8). As such, it appears that the Office Action alleges that transmission power level, error rate, signal/noise ratio and/or IMD correspond to a first parameter.

However, *Goldstein* does not teach or suggest "negotiating, with a second DSL modem, a limiting value of a first performance parameter" as recited in amended claim 2. While *Goldstein* teaches that "the power of the transmitted signal is maintained at its maximum permissible level (e.g. 0 dB drop)" (col. 5, line 67 to col. 6, line 1), *Goldstein* does not disclose or suggest negotiating a limiting value of transmission power level with a second DSL modem. Additionally, even though "the power can be adjusted to an optimal level to reduce error to a

minimum” (*Goldstein*, col. 5, lines 51-53), *Goldstein* does not disclose or suggest negotiating a limiting value of error rate with a second DSL modem. Rather, *Goldstein* teaches “the error rate being a function of both the signal/noise ratio and the IMD” (col. 2, lines 25-26). Furthermore, while *Goldstein* teaches “measurements of signal/noise ratio and IMD are made” (col. 5, lines 40-41), *Goldstein* does not disclose or suggest a limiting value of signal/noise ratio or IMD, much less negotiating a limiting value of signal/noise ratio or IMD with a second DSL modem. Rather, *Goldstein* teaches “desired power level based on the measured signal/noise ration and the measured IMD” (col. 5, lines 62-64). Thus, *Goldstein* does not teach or suggest “negotiating, with a second DSL modem, a limiting value of a first performance parameter” as recited in amended claim 2.

Therefore, for at least the reasons described above, *Goldstein* fails to disclose, teach or suggest all of the features recited in amended claim 2. Therefore, Applicants respectfully request that the rejection of claim 2 be withdrawn.

C. Dependent Claims 3-4, 6, 9-11 and 29

Since independent claim 2 is allowable, Applicants respectfully submit that claims 3-4, 6, 9-11, and 29 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir.1988). Therefore, Applicants respectfully request that the rejection of claims 3-4, 6, 9-11, and 29 be withdrawn.

D. Independent Claim 14

Independent claim 14 has been amended to include the allowable subject matter of claim 16, which has been correspondingly canceled. Thus, amended claim 14 now recites subject matter that the Office Action admitted to be allowable. Therefore, Applicants respectfully request that the rejection of claim 14 be withdrawn.

E. Dependent Claims 20 and 30

Since independent claim 14 is allowable, Applicants respectfully submit that claims 20 and 30 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir.1988). Therefore, Applicants respectfully request that the rejection of claims 20 and 30 be withdrawn.

F. Independent Claim 22

Independent claim 22 has been amended to include the allowable subject matter of claim 23, which has been correspondingly canceled. Thus, amended claim 22 now recites subject matter that the Office Action admitted to be allowable. Therefore, Applicants respectfully request that the rejection of claim 22 be withdrawn.

G. Dependent Claim 28

Since independent claim 22 is allowable, Applicants respectfully submit that claim 28 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir.1988). Therefore, Applicants respectfully request that the rejection of claim 28 be withdrawn.

H. Independent Claim 37

Applicants' amended claim 2 provides as follows (emphasis added):

A receiving digital subscriber line (DSL) modem comprising:
a demodulator in communication with a DSL;
a memory;
a central processing unit (CPU) in communication with the demodulator and the memory; and
a control program stored in the memory, ***the control program configured to:***
negotiate, with a transmitting DSL modem, a limiting value of a first performance parameter,
determine a signal-to-noise-ratio for a signal received from the transmitting DSL modem, the signal exhibiting the first performance parameter; and
request, from the transmitting DSL modem, an adjustment in a second performance parameter associated with the received signal, wherein the second performance parameter is different from the first performance parameter.

Applicants respectfully submit that amended independent claim 37 is allowable for at least the reason that *Goldstein* does not disclose, teach, or suggest at least the features recited and emphasized above in amended claim 37.

Goldstein does not teach or suggest “the control program configured to: negotiate, with a second DSL modem, a limiting value of a first performance parameter” as recited in amended claim 37. While *Goldstein* teaches that “the power of the transmitted signal is maintained at its maximum permissible level (e.g. 0 dB drop)” (col. 5, line 67 to col. 6, line 1), *Goldstein* does not disclose or suggest negotiating a limiting value of transmission power level with a second DSL modem. Additionally, even though “the power can be adjusted to an optimal level to reduce error to a minimum” (*Goldstein*, col. 5, lines 51-53), *Goldstein* does not disclose or suggest negotiating a limiting value of error rate with a second DSL modem. Rather, *Goldstein* teaches “the error rate being a function of both the signal/noise ratio and the IMD” (col. 2, lines 25-26). Furthermore, while *Goldstein* teaches “measurements of signal/noise ratio and IMD are made” (col. 5, lines 40-41), *Goldstein* does not disclose or suggest a limiting value of signal/noise ratio or IMD, much less negotiating a limiting value of signal/noise ratio or IMD with a second DSL modem. Rather, *Goldstein* teaches “desired power level based on the measured signal/noise ratio and the measured IMD” (col. 5, lines 62-64). Thus, *Goldstein* does not teach or suggest “the control program configured to: negotiate, with a second DSL modem, a limiting value of a first performance parameter” as recited in amended claim 37.

Therefore, for at least the reasons described above, *Goldstein* fails to disclose, teach or suggest all of the features recited in amended claim 37. Therefore, Applicants respectfully request that the rejection of claim 37 be withdrawn.

I. Dependent Claims 38-40

Since independent claim 37 is allowable, Applicants respectfully submit that claims 38-40 are allowable for at least the reason that each depends from an allowable claim. *In re Fine*,

837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir.1988). Therefore, Applicants respectfully request that the rejection of claims 38-40 be withdrawn.

IV. Claim Rejections under 35 U.S.C. §103(a)

Claims 8 and 19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Goldstein* in view of *Betts et al.* (U.S. Patent No. 5,682,378), hereafter "*Betts*." Claim 13 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Goldstein* in view of *Archibald et al.* (U.S. Patent No. 5,369,703), hereafter "*Archibald*." Claim 19 has been canceled without prejudice, waiver, or disclaimer. Applicants respectfully traverse this rejection as applied to pending claims 8 and 13.

The U.S. Patent and Trademark Office ("USPTO") has the burden under section 103 to establish a *prima facie* case of obviousness according to the factual inquiries expressed in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). The four factual inquiries, which are also expressed in MPEP § 2141, are as follows:

- (A) Determining the scope and contents of the prior art;
- (B) Ascertaining the differences between the prior art and the claims in issue;
- (C) Resolving the level of ordinary skill in the pertinent art; and
- (D) Evaluating evidence of secondary considerations.

Applicants respectfully submit that a *prima facie* case of obviousness is not established using the art of record.

A. Dependent Claim 8

For the reasons discussed in section III.B above, *Goldstein* does not teach or suggest "negotiating, with a second DSL modem, a limiting value of a first performance parameter" as recited in amended claim 2. The addition of *Betts* does not overcome this deficiency. Rather, *Betts* discloses "a transmitting modem ... with the ability to cancel far listener echo" (col.1, lines

33-34). While *Betts* discloses “Cancellation of the far listener echo is achieved by coupling the signal containing the in-phase, quadrature ... components of the modem transmit signal to a far echo canceller” (col. 1, lines 37-40), *Betts* does not teach or suggest “negotiating, with a second DSL modem, a limiting value of a first performance parameter” as recited in amended claim 2.

Furthermore, the Office Action alleges that “it would have been obvious to one of ordinary skill in the art that the error rate of the first performance parameter in Goldstein’s receiver of the transmitting modem is transmit data rate as taught by *Betts*” (Office Action, page 9). Applicants respectfully disagree. One skilled in the art would understand that error rate is not the same as transmit data rate. It is possible to have different error rates at the same transmission rate. Likewise, it is possible to have the same error rate for different transmission rates. Thus, Applicants submit that it would not be obvious to combine *Goldstein* and *Betts*.

Because independent claim 2 is allowable over *Goldstein* in view of *Betts*, Applicants respectfully submit that claim 8 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claim 8 be withdrawn.

B. Dependent Claim 13

For the reasons discussed in section III.B above, *Goldstein* does not teach or suggest “negotiating, with a second DSL modem, a limiting value of a first performance parameter” as recited in amended claim 2. The addition of *Archibald* does not overcome this deficiency. While, *Archibald* discloses “Commands sent from one modem to another using a secondary channel are sent at a rate much slower than the primary channel data rate” (col. 1, lines 15-18), *Archibald* does not teach or suggest “a limiting value of a first performance parameter”, much less “negotiating, with a second DSL modem, a limiting value of a first performance parameter” as recited in amended claim 2.

Because independent claim 2 is allowable over *Goldstein* in view of *Archibald*, Applicants respectfully submit that claim 13 is allowable for at least the reason that it depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir. 1988). Therefore, Applicants respectfully request that the rejection of claim 13 be withdrawn.

V. Allowable Subject Matter

Applicants thank the Examiner for allowance of claims 31-36, as noted on page 11 of the Office Action. In addition, Applicants acknowledge the Examiner's conclusions that the claims 5, 7, 16, 18, 21, and 23-25 would be allowable if rewritten in independent form.

Applicants have amended independent claim 14 to include the allowable subject matter of claim 16, which has been correspondingly canceled. Also, Applicants have amended independent claim 22 to include the allowable subject matter of claim 23, which has been correspondingly canceled. As such, amended claims 14 and 22 now recite subject matter that the Office Action admitted to be allowable. Since independent claims 16 and 22 are allowable, Applicants respectfully submit that claims 18, 21, and 24-25 are in condition for allowance for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir.1988). Thus, Applicants respectfully submit that claims 18, 21, and 24-25 are in condition for allowance for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir.1988).

Applicants have not amended dependent claims 5 and 7 to incorporate the limitations of their base claims in this response because Applicant believes, for the reasons detailed above, that base claim 2 is allowable. Thus, Applicants respectfully submit that claims 5 and 7 are in condition for allowance for at least the reason that each depends from an allowable claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596, 1598 (Fed. Cir.1988).

VI. Newly Added Claims

New claims 41-72 are based on subject matter that is explicit and/or inherent within the description of the specification and/or the drawings. Applicants submit that no new matter has been added in the new claims 41-72, and that new claims 41-72 are allowable over the cited references.

Applicants respectfully submit that claims 41-48, which depend either directly or indirectly from independent claim 37, are allowable for at least the reason that each depends from an allowable independent claim. Applicants respectfully submit that claim 49, which depends either directly or indirectly from independent claim 2, is allowable for at least the reason that it depends from an allowable independent claim. Applicants respectfully submit that claims 50-53, which depend either directly or indirectly from independent claim 14, are allowable for at least the reason that each depends from an allowable independent claim. Applicants respectfully submit that claims 54-56, which depend either directly or indirectly from independent claim 22, are allowable for at least the reason that each depends from an allowable independent claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Applicants respectfully submit that claims 57-62, which depend either directly or indirectly from independent claim 31, are allowable for at least the reason that each depends from an allowed independent claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

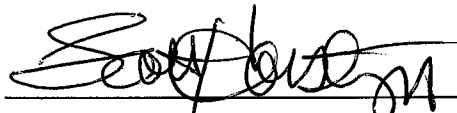
Applicants respectfully submit that dependent claim 5 has been rewritten in independent form, including all of the limitations of base claim 2, as independent claim 63. Thus, independent claim 63 now recites subject matter that the Office Action admitted to be allowable. In addition, Applicants submit that claims 64-72, which depend either directly or indirectly from independent claim 63, are allowable for at least the reason that each depends from an allowable independent claim. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Thus, Applicants request the Examiner to enter and allow the above new claims.

CONCLUSION

Applicants respectfully request that all outstanding objections and rejections be withdrawn and that this application and presently pending claims 2-14, 18, 20-22, 24-30, and 37-72 be allowed to issue. Any statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and official notice, or statements interpreted similarly, should not be considered well known since the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions. If the Examiner has any questions or comments regarding Applicants' response, the Examiner is encouraged to telephone Applicants' undersigned counsel.

Respectfully submitted,

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